Appendix Table 3. Preliminary pre-sample and applied liquid swine manure sample total nutrient analysis summary from each demonstration site, 2002

Swine Manure Nutrient Utilization Project - 2002 CORN Field Sites

Understanding Nutrient Rates Applied in Replicated Manure Strip Treatments

Field sites listed alphabetically by county name.

Field sites with liquid swine manure applied before 2002 corn crop (first-year manure treatment effect evaluation).

County	Field site (Nearby town)	Desired Application Rates	Nutrient Analysis of Pre-Application Manure Sample (lb/1000 gallon total nutrients)	Calculation of Manure Treatment Strip Application Rates (GPA = gallons per acre)	Nutrient Analysis of Field-Applied Manure Samples (lb/1000 gal Total Nutrients)	Estimated Total Manure Nutrients Applied (Applied sample analysis X calculated application rate) lb Total Nutrients/Acre N	P_2O_5	K_2O
Davis	Bloomfield	Check = No manure, no fertilizer	49 lb Total N/1000 gallon	No manure nor commercial fertilizer applied to check strips	51 lb Total N/1000 gallon	0	0	0
"CORN after SB" field site		Low rate = 48 lb Total P_2O_5/acre	35 lb Total P_2O_5/1000 gallon	(48 lb total P_2O_5/acre) / (35 lb total P_2O_5/1000 gal) = 1,372 GPA	35 lb Total P_2O_5/1000 gallon	70	48	48
Manure injected 04/05/2002		High rate = 153 lb Total N/acre	31 lb Total K_2O/1000 gallon	(153 lb total N/acre) / (49 lb total N/1000 gal) = 3,122 GPA	35 lb Total K_2O/1000 gallon	159	109	109
Hamilton	Stanhope	Check = No manure, no fertilizer	43 lb Total N/1000 gallon	No manure nor commercial fertilizer applied to check strips	47 lb Total N/1000 gallon	0	0	0
"CORN after SB" field site		Low rate = 75 lb Total N/acre	9 lb Total P_2O_5/1000 gallon	(75 lb total N/acre) / (43 lb total N/1000 gal) = 1,750 GPA	19 lb Total P_2O_5/1000 gallon	94[a]	38[a]	64[a]
Manure injected 11/20/2001		High rate = 150 lb Total N/acre	24 lb Total K_2O/1000 gallon	(150 lb total N/acre) / (43 lb total N/1000 gal) = 3,500 GPA	32 lb Total K_2O/1000 gallon	188[a]	76[a]	128[a]

[a] Estimate of total manure nutrients applied is calculated using actual application rates, which were approximately 2,000 and 4,000 GPA.

Hardin	Iowa Falls	Check = No manure, no fertilizer	38.5 lb Total N/1000 gal	No manure nor commercial fertilizer applied to check strips	32 lb Total N/1000 gallon	0	0	0
"CONTINUOUS CORN" field site		Low rate = 60 lb Total P_2O_5/acre	28.8 lb Total P_2O_5/1000 gal	(60 lb total P_2O_5/ac) / (28.8 lb total P_2O_5/1000 gal) = 2,083 GPA	17 lb Total P_2O_5/1000 gallon	67	35	62
Manure injected 11/06/2001		High rate = 190 lb Total N/acre	26.6 lb Total K_2O/1000 gal	(190 lb total N/acre) / (38.5 lb total N/1000 gal) = 4,935 GPA	30 lb Total K_2O/1000 gallon	158	84	148
Hardin	Iowa Falls	Check = No manure, no fertilizer	38.5 lb Total N/1000 gal	No manure nor commercial fertilizer applied to check strips	32 lb Total N/1000 gallon	0	0	0
"CORN after SB" field site		Low rate = 100 lb Total P_2O_5/acre	28.8 lb Total P_2O_5/1000 gal	(100 lb total P_2O_5/ac) / (28.8 lb total P_2O_5/1000 gal) = 3,469 GPA	17 lb Total P_2O_5/1000 gallon	111	59	104
Manure injected 11/06/2001		High rate = 193 lb Total N/acre	26.6 lb Total K_2O/1000 gal	(193 lb total N/acre) / (38.5 lb total N/1000 gal) = 5,013 GPA	30 lb Total K_2O/1000 gallon	160	85	150
Washington	West Chester	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	68 lb Total N/1000 gallon	0	0	0
"CORN after SB" field site		Low rate = 75 lb Total N/acre	assumed nutrient analysis of	(75 lb total N/acre) / (55 lb total N/1000 gal) = 1,365 GPA	47 lb Total P_2O_5/1000 gallon	119[b]	82[b]	74[b]
Manure injected 11/12/2001		High rate = 150 lb Total N/acre	55 lb Total N/1000 gallon	(150 lb total N/acre) / (55 lb total N/1000 gal) = 2,730 GPA	42 lb Total K_2O/1000 gallon	238[b]	165[b]	147[b]

[b] Estimate of total manure nutrients applied is calculated using actual application rates, which were approximately 1,750 and 3,500 GPA.

Appendix Table 3 continued. Preliminary pre-sample and applied liquid swine manure sample total nutrient analysis summary from each demonstration site, 2002.

Swine Manure Nutrient Utilization Project - 2002 CORN Field Sites

Understanding Nutrient Rates Applied in Replicated Manure Strip Treatments

Field sites listed alphabetically by county name.

Field sites with liquid swine manure applied before 2001 soybean crop (residual year manure treatment effect evaluation).

County	Field site (Nearby town)	Desired Application Rates	Nutrient Analysis of Pre-Application Manure Sample (lb/1000 gallon total nutrients)	Calculation of Manure Treatment Strip Application Rates (GPA = gallons per acre)	Nutrient Analysis of Field-Applied Manure Samples (lb/1000 gal Total Nutrients)	Estimated Total Manure Nutrients Applied (Applied sample analysis X calculated application rate) lb Total Nutrients/Acre N	P_2O_5	K_2O
Clay	Rossie	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	59 lb Total N/1000 gallon	0	0	0
"CORN after SB" field site		Low rate = 100 lb Total N/acre	assumed nutrient analysis of	(100 lb total N/acre) / (60 lb total N/1000 gal) = 1,700 GPA	31 lb Total P_2O_5/1000 gallon	100	53	54
Manure applied & inc. 05/15/2001		High rate = 200 lb Total N/acre	60 lb Total N/1000 gallon	(200 lb total N/acre) / (60 lb total N/1000 gal) = 3,400 GPA	32 lb Total K_2O/1000 gallon	201	105	109

					lb/1000 gal Total Nutrients				
					Applied manure	1:1 dilution [c]			
Washington	West Chester	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	53 lb total N	30 lb total N	0	0	0
"CORN after SB" field site		Low rate = 100 lb Total N/acre	assumed nutrient analysis of	(100 lb total N/acre) / (26.5 lb total N/1000 gal) [c] = 3,800 GPA	33 lb Total P_2O_5	18 lb Total P_2O_5	114	68	61
Manure injected 04/19/2001		High rate = 200 lb Total N/acre	53 lb Total N/1000 gallon	(200 lb total N/acre) / (53 lb total N/1000 gal) = 3,800 GPA	30 lb Total K_2O	16 lb Total K_2O	201	125	114

[c] Low rate manure application achieved by diluting liquid manure with water in a 1:1 ratio.

Appendix Table 3 continued. Preliminary pre-sample and applied liquid swine manure sample total nutrient analysis summary from each demonstration site, 2002.

Swine Manure Nutrient Utilization Project - 2002 SOYBEAN Field Sites

Understanding Nutrient Rates Applied in Replicated Manure Strip Treatments

Field sites listed alphabetically by county name.

Field sites with liquid swine manure applied before 2002 soybean crop (first-year manure treatment effect evaluation).

County	Field site (Nearby town)	Desired Application Rates	Nutrient Analysis of Pre-Application Manure Sample (lb/1000 gallon total nutrients)	Calculation of Manure Treatment Strip Application Rates (GPA = gallons per acre)	Nutrient Analysis of Field-Applied Manure Samples (lb/1000 gal Total Nutrients)	Estimated Total Manure Nutrients Applied (Applied sample analysis X calculated application rate) lb Total Nutrients/Acre N	P_2O_5	K_2O
Floyd	Nashua	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	63 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 60 lb Total P_2O_5/acre	assumed nutrient analysis of	(60 lb total P_2O_5/ac) / (26 lb total P_2O_5/1000 gal) = 2,300 GPA	44 lb Total P_2O_5/1000 gallon	147[d]	103[d]	112[d]
Manure injected 11/09/2001		High rate = 120 lb Total P_2O_5/acre	26 lb Total P_2O_5/1000 gallon	(120 lb total P_2O_5/ac) / (26 lb total P_2O_5/1000 gal) = 4,600 GPA	48 lb Total K_2O/1000 gallon	271[d]	189[d]	207[d]
Hamilton	Stanhope	Check = No manure, no fertilizer	43 lb Total N/1000 gallon	No manure nor commercial fertilizer applied to check strips	46 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 100 lb Total N/acre	9 lb Total P_2O_5/1000 gallon	(100 lb total N/acre) / (43 lb total N/1000 gal) = 2,325 GPA	23 lb Total P_2O_5/1000 gallon	107	53	79
Manure injected 11/21/2001		High rate = 200 lb Total N/acre	24 lb Total K_2O/1000 gallon	(200 lb total N/acre) / (43 lb total N/1000 gal) = 4,650 GPA	34 lb Total K_2O/1000 gallon	214	107	158
Washington	West Chester	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	71 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 100 lb Total N/acre	assumed nutrient analysis of	(100 lb total N/acre) / (55 lb total N/1000 gal) = 1,818 GPA	54 lb Total P_2O_5/1000 gallon	124[e]	95[e]	68[e]
Manure injected 11/16/2001		High rate = 200 lb Total N/acre	55 lb Total N/1000 gallon	(200 lb total N/acre) / (55 lb total N/1000 gal) = 3,636 GPA	39 lb Total K_2O/1000 gallon	249[e]	189[e]	137[e]

[d] Estimate of total manure nutrients applied is calculated using actual application rates, which were approximately 2,340 and 4,305 GPA.

[e] Estimate of total manure nutrients applied is calculated using actual application rates, which were approximately 1,750 and 3,500 GPA.

Appendix Table 3 continued. Preliminary pre-sample and applied liquid swine manure sample total nutrient analysis summary from each demonstration site, 2002.

Swine Manure Nutrient Utilization Project - 2002 SOYBEAN Field Sites

Understanding Nutrient Rates Applied in Replicated Manure Strip Treatments
Field sites listed alphabetically by county name.

Field sites with liquid swine manure applied before 2001 corn crop (residual year manure treatment effect evaluation).

County	Field site (Nearby town)	Desired Application Rates	Nutrient Analysis of Pre-Application Manure Sample (lb/1000 gallon total nutrients)	Calculation of Manure Treatment Strip Application Rates (GPA = gallons per acre)	Nutrient Analysis of Field-Applied Manure Samples (lb/1000 gal Total Nutrients)	Estimated Total Manure Nutrients Applied (Applied sample analysis X calculated application rate) lb Total Nutrients/Acre N	P_2O_5	K_2O
Clay	Rossie	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	59 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 75 lb Total N/acre	assumed nutrient analysis of	(75 lb total N/acre) / (60 lb total N/1000 gal) = 1,200 GPA	29 lb Total P_2O_5/1000 gallon	71	35	38
Manure applied & inc. 05/15/2001		High rate = 150 lb Total N/acre	60 lb Total N/1000 gallon	(150 lb total N/acre) / (60 lb total N/1000 gal) = 2,400 GPA	32 lb Total K_2O/1000 gallon	142	70	77
Floyd	Nashua	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	47 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 60 lb Total P_2O_5/acre	assumed nutrient analysis of	(60 lb total P_2O_5/ac) / (28 lb total P_2O_5/1000 gal) = 2,200 GPA	25 lb Total P_2O_5/1000 gallon	103	55	81
Manure injected 04/27/2001		High rate = 120 lb Total P_2O_5/acre	28 lb Total P_2O_5/1000 gallon	(120 lb total P_2O_5/ac) / (28 lb total P_2O_5/1000 gal) = 4,400 GPA	37 lb Total K_2O/1000 gallon	207	110	163
Hardin	Iowa Falls	Check = No manure, no fertilizer	48.2 lb Total N/1000 gal	No manure nor commercial fertilizer applied to check strips	48 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 100 lb Total P_2O_5/acre	41.6 lb Total P_2O_5/1000 gal	(100 lb total P_2O_5/ac) / (41.6 lb total P_2O_5/1000 gal) = 2,404 GPA	38 lb Total P_2O_5/1000 gallon	115	91	75
Manure injected 04/26/2001		High rate = 193 lb Total N/acre	35.5 lb Total K_2O/1000 gal	(193 lb total N/acre) / (48.2 lb total N/1000 gal) = 4,004 GPA	31 lb Total K_2O/1000 gallon	192	152	124

					lb/1000 gal Total Nutrients: Applied manure	1:1 dilution [f]			
Washington	West Chester	Check = No manure, no fertilizer	Based on previous samples,	No manure nor commercial fertilizer applied to check strips	61 lb total N	34 lb total N	0	0	0
"SB after CORN" field site		Low rate = 75 lb Total N/acre	assumed nutrient analysis of	(75 lb total N/acre) / (24.5 lb total N/1000 gal) [f] = 3,100 GPA	45 lb Total P_2O_5	24 lb Total P_2O_5	105	74	62
Manure injected 11/10/2000		High rate = 150 lb Total N/acre	49 lb Total N/1000 gallon	(150 lb total N/acre) / (49 lb total N/1000 gal) = 3,100 GPA	36 lb Total K_2O	20 lb Total K_2O	189	140	112

[f] Low rate manure application achieved by diluting liquid manure with water in a 1:1 ratio.

Wright	Dows	Check = No manure, no fertilizer	41 lb Total N/1000 gallon	No manure nor commercial fertilizer applied to check strips	49 lb Total N/1000 gallon	0	0	0
"SB after CORN" field site		Low rate = 75 lb Total N/acre	25 lb Total P_2O_5/1000 gallon	(75 lb total N/acre) / (41 lb total N/1000 gal) = 1,850 GPA	35 lb Total P_2O_5/1000 gallon	91	65	61
Manure injected 04/29/2001		High rate = 150 lb Total N/acre	34 lb Total K_2O/1000 gallon	(150 lb total N/acre) / (41 lb total N/1000 gal) = 3,700 GPA	33 lb Total K_2O/1000 gallon	181	130	122